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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,341	09/04/2001	Tsuneo Sato	0649-0799P	9771

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EXAMINER	
GOOD JOHNSON, MOTILEWA	
ART UNIT	**PAPER NUMBER**
2672	7

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/944,341	SATO ET AL.	
	Examiner	Art Unit	
	Motilewa A. Good-Johnson	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 January 2004 and 01 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 September 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is responsive to the following communications: Application, filed 09/04/2001; Preliminary Amendment A, filed 09/04/2001; Amendment B, filed 01/26/2004; Amendment C, filed 03/01/2004.

This action is made final.

2. Claims 9-16 are pending in this application. Claims 1-8 have been canceled. Claims 9, 15 and 16 are independent claims.

3. The present title of this application is "Color Character Description Apparatus, Color Management Apparatus, Image Conversion Apparatus and Color Correction Method" (as originally filed)

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 9-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Edge et al., U.S. Patent Number 6,362,808 B1, "Arrangement for Mapping Color Between Imaging Systems and Method Therefor", class 345/601, 03/26/2002, filed 08/12/1997.

As per independent claim 9, a color management apparatus for converting supplied image data by using a lookup table of color characteristic data into output image data, said color management apparatus comprising: a lookup table which is composed of characteristic points which are points indicating the relationship between supplied image data and output image data which are determined to be impossible to be interpolated when a process for converting image data is performed; (Edge discloses generating a look-up table and a device link generator including a device link table builder, col. 7, lines 27-57) and image data converting means for converting supplied image data by using said lookup table composed of the characteristic points into output image data. (Edge discloses converting source coordinates to destination coordinates, col. 7, lines 58-67)

With respect to dependent claim 10, further comprising table developing means for developing said lookup table into multidimensional lookup table; wherein said image data converting means uses the multidimensional lookup table developed by said table development means . . . (Edge discloses a table builder which generates the look-up table by generating a series of source device coordinates as input value entries, col. 7, lines 50-57)

With respect to dependent claim 11, table development means develops said lookup table into said multidimensional lookup table in such a manner that all of characteristic points of said lookup table composed of the characteristic points are contained. (Edge discloses the builder generates a subset of source device coordinates on for each dimension of the source device color coordinate space, col. 7, lines 54-57)

With respect to dependent claim 12, table development means develops said lookup table into the multidimensional lookup table such that data corresponding to grid points of said multidimensional lookup table is composed of output data of said lookup table and data of information of adjacent grid points for interpolating a portion between grid points. (Edge discloses transformation techniques supplemented by interpolation between entries in a multidimensional lookup table, col. 1, lines 48-50)

With respect to dependent claim 13, multidimensional lookup table is a compressed . . . table formed by compressing said multidimensional lookup table; restoring means is provided which restore said compressed multidimensional lookup table into said multidimensional lookup table; said image data converting means causes said restoring means to restore said compressed multidimensional lookup table and uses obtained . . . table to convert supplied image data into output image data. (Edge discloses to reduce computational and memory requirements selecting only a subset for the number of entries in each dimension of the lookup table and performing loop calculations to fill in the remaining entries, col. 8, lines 5-27)

With respect to dependent claim 14, table recording means for recording said multidimensional lookup table . . . in a memory; and updating means for operating said table development means and said table recording means . . . , image data converting means uses said . . . table recorded in said memory to convert supplied image data into output image data. (Edge discloses storing and constructing the look-up table and using interpolation to convert source coordinates to destination coordinates, col. 7, lines 58-67)

As per independent claim 15, an image converting apparatus comprising: a color management apparatus incorporating image data converging means which uses a lookup table of color characteristic data produced by a characteristic description apparatus to convert supplied image data into output image data . . . ; (Edge discloses a color management system, col. 4, lines 1-7 and further discloses a lookup table to enable interpolation of destination coordinates form source coordinates, col. 7, lines 35-57) a storage portion for storing a plurality of color characteristic data items having different color characteristics; wherein color characteristic data is selected in accordance with the characteristic of image data . . . to convert supplied image data into output image data. (Edge discloses storing and constructing the look-up table and using interpolation to convert source coordinates to destination coordinates, col. 7, lines 58-67)

As per independent claim 16, a color correction method structured such that a multidimensional lookup table is used to convert a supplied image signal into an output image signal, said color correction method comprising the steps of: producing a lookup table composed of characteristic points which are point indicating the relationship between input color image signals and output color image signals which are determined to be impossible to be developed in a table development process; (Edge discloses generating a look-up table and a device link generator including a device link table builder, col. 7, lines 27-57) performing table development process . . . characteristic points is developed into a multidimensional lookup table; (Edge discloses a table builder which generates the look-up table by generating a series of source device coordinates

as input value entries, col. 7, lines 50-57) and converting supplied image signal into an output image signal by using said multidimensional lookup table . . . (Edge discloses transformation techniques supplemented by interpolation between entries in a multidimensional lookup table, col. 1, lines 48-50)

Response to Arguments

6. Applicant's arguments filed 01/26/2004 have been fully considered but they are not persuasive.

Applicant argues that Edge fails to teach a lookup table provided that is composed of characteristic points, which are determined to be impossible to be interpolated when a process for converting image data is performed, the characteristic points indicate the relationship between supplied image data and output image data.

Edge discloses a lookup table (col. 7, lines 18-19) which is composed of characteristic points (col. 7, lines 1-1-13) which are points indicating the relationship between supplied image data and output image data (col. 7, lines 40-42) which are determined to be impossible to be interpolated when a process for converting image data is performed; (col. 7, lines 27-57) and image data converting means (col. 7, line 62) for converting supplied image data by using said lookup table composed of the characteristic points into output image data. (col. 7, lines 58-67).

Edge further discloses that error reducer which reduces the error between the source device and the destination values. The error reducer is further provided return

destination device coordinates, i.e. characteristic points, to the device link table builder, which enters them in the look-up table corresponding to a source device color coordinate (col. 8, line 49 – col. 9, line 17). Edge discloses that for color within the gamut of the destination device the error can be reduced using reduction techniques in which estimates of the destination coordinates which are likely to match source coordinates (col. 8, lines 20-67). Therefore, the Examiner interprets the estimates of the destination coordinates, i.e. characteristic points, as points that are impossible to be interpolated.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

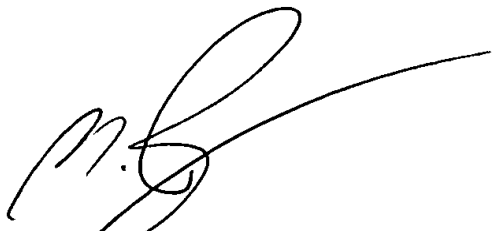
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Motilewa A. Good-Johnson whose telephone number is (703) 305-3939. The examiner can normally be reached on Monday - Friday 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Motilewa A. Good-Johnson
Examiner
Art Unit 2672

mgj



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